

Indian Rose Annual - IRA 2020

INTREPID ROSES

HOW ROSES REACHED INDIAN GARDENS BY PERILOUS PATHS,
TREACHEROUS SEAS, SWAMPS AND HIGH MOUNTAINS

Girija and M. S. Viraraghavan

India, often referred to as the 'Indian sub-continent', has a climate influenced greatly by

1. The Himalayas, the world's highest mountain range, which, effectively prevents cold air from Central Asia reaching the country, and
2. The two monsoons – the South West Monsoon (June to September) where most of the rain falls over large parts of the country, and the North east monsoon, (October to December) which covers the southern part of the eastern peninsular coast.

Why do we refer to roses which came into India as intrepid roses? This is for the simple reason that the two entry points to India through the Himalayan mountains in the north, and the oceans around the coast - the Bay of Bengal on the east and the Arabian Sea on the west, were indeed difficult, even hazardous points for the entry of roses, which our researches show was much earlier than previously reckoned.

Access through the Himalayas was feasible only through 2 passes – the Khyber Pass and the Bolan Pass, which lie on the border between Afghanistan and present day Pakistan - this was the trade route through which roses must have arrived. This route would have been connected to China and further east through the famed Silk Road, which was a most romantic but tremendously dangerous access, dominated as it was by violent tribesmen often at war with each other. This is the area of the world's fastest horses and the fiercest conquerors - Genghis Khan and Tamarlane to name but two.

The seas in those days - pre Christian era - were hardly of easier access as the monsoon winds and the frequent storms called cyclones, made sea voyages very difficult indeed for the sailing ships of yore.

It is therefore quite amazing that the love of the rose overcame such dangers, and roses reached India and the rest of the world carried by intrepid adventurers. Hence, intrepid roses.

A few words on India's wild roses. As mentioned earlier, the Himalayas moderate the country's climate with the result that areas on the plains have a much warmer climate than other places at the same latitudes across the northern hemisphere. Consequently, our wild roses are confined to the higher reaches of the Himalayas, including the mountains in the north East on the border with Myanmar. There are over 8 endemic rose species in the Himalayas and if we include their eco-types, the numbers increase to many more. Apart from endemic species, there occur here a number of wild roses which have migrated both from the east and west - from China and further east as well as Iran and further west.

On the plains of the Indian mainland the only species present is that remarkable tropical rose, *R. clinophylla*, about which we will speak later.

The highest areas - above 1500 meters elevation - of the Western Ghat mountains of south India are home to that largest flowered of all musk roses, *R. leschenaultiana*.

We now come to the focus of this talk - how different heritage roses and species entered India over the centuries by land and sea. The crucial point we would like to emphasize is that the arrival of these roses occurred substantially earlier than what was thought before, with the discovery of the Sintra Prashasthi or stone tablet, dating to 1287 C.E. This tablet, which presently is lodged in a heritage property in Sintra, near Lisbon, Portugal, was originally erected in the temple of Somanatha, in western India, a temple which is now under the sea. The tablet, which is an edict of a king in the region, commands the gardener's guild to supply 200 white roses and 2000 white oleanders to the temple every day of the year in return for which the guild would be granted lands. Such white roses which could flower throughout the year could only have been a Chinese rose - as you know, the quality of continuous flowering was the gift of China to the world of roses. These roses must have been growing in western India for quite some time at the time of the edict. We speculate that they would have arrived from China through the Silk Road. As our map shows the Silk Road refers both to the land route as well as the sea route from the east to Two Portuguese travellers, Domingo Paes and Fernando Nuniz, write about the king being garlanded with white roses and his palace being decorated with white roses during a festival called Dasehra, which falls in October every year. Surely this must have been a repeat flowering rose? Vijayanagar was no ordinary city in those days. It was described as being larger than Rome by the Portuguese traveller Duarte Barbosa. India and further west to the Middle East and Europe.

We visited Sintra some years back to view the tablet - it was indeed ancient, the words written in Sanskrit, the language of ancient India. But we hasten to clarify that the date of the tablet 1287 C.E. is the only direct evidence we have as of now of the date of arrival of roses into India. Surprisingly enough, another (or is it the

same?) repeat flowering white rose appears in another part of India. We are now talking of Vijayanagar, the capital of the great empire of the same name which ruled south India between 1300 and 1500 CE.

Earlier we had mentioned about the Sintra Portugal tablet white roses having probably arrived through the Silk Road. Clearly many more roses came to India through this same route because another traveller Rashid-ud-din, around 1300 C.E. talks of the people of Gujarat, in the west of India, being very fortunate to grow more than 60 kinds of roses.

Going to south India again, to the west coast, we have the narrative of Ludovico Varthema, in 1503 C.E., to the effect that the people of the area around Calicut, grow roses in white, pink, red and yellow. How did so many roses reach this location? Clearly it must have been through a sea route. Speculating again, there is ample evidence of Chinese ships calling at Calicut port, including the fleet of that great admiral Zheng He. Indeed, he is reputed to have died in Calicut in 1433 C.E. Chinese galleons often carried pots of roses on board to remind the sailors of their homeland. It is thus quite possible that roses in different colours reached India's west coast in this manner.

We have said earlier that the date of the Sintra Tablet, 1287 C.E., is the only direct evidence which we have of when roses reached India from other lands. But we must emphasize that in ancient India where history was never documented but was invariably only passed on by word of mouth, it is difficult to be precise. There are references to roses from very early times. In the ancient treatises on Ayurveda, the Indian system of medicine, authored by eminent physicians like Susruta (around 6th century B.C.E.) and Charaka (4th Century B.C.E.) there are references to the use of roses for the treatment of various ailments. These roses could be both the species in the Himalayas and those which may have come in from other lands, since there was trade between India and adjacent countries from earliest times, and with Buddhist pilgrims travelling to and fro. Two well known Chinese pilgrims were Fa Hien (Faxian) and Huiyen Tsang (Xuanzang). And in reverse, a Buddhist scholar from south India, Bodhidharma (called Damo in Chinese) went in the 5th century C.E to China and started the Chan (Zen) system of Buddhism in the monastery called Shaolin in Henan region. He is credited with creating the Shaolin Kungfu martial arts system.

Coming to the Mughal Empire era - 1500 C.E. onwards, the first Emperor of this dynasty, Babur, in his autobiography entitled Baburnama, talks of introducing the musk rose from Persia (Iran) into India, along with the narcissus. Babur had his roots in Central Asia, and the musk rose he refers to is *Rosa glandulifera*, now *Rosa moschata nastarana*, the Persian form of the musk rose.

There are no further references to rose introductions during the Mughal period of Indian history though all the emperors and their courts were garden lovers and established many gardens of roses and other plants. There is however an interesting story of this time - the discovery of rose oil, called attar, by the Empress Nur Jehan wife of the Emperor Jehangir in the 1600's. Whilst immersed in her bath of hot water scented with fragrant rose petals, she saw an oily fragrant substance floating on the water surface. This was rose oil called 'attar' which became the base of many scents and was widely used in Indian cuisine. Rose water is said to have been discovered during early Buddhist times, and is mentioned in Ayurveda texts.

What was this rose that Nur Jehan scented her bath with? Much later when roses were commercially cultivated for extraction of rose oil, in places like Ghazipur, Kanauj and other areas of north and east India, the rose used was *R. damascena bifera*, the Autumn Damask. Since this rose is also of Persian or Middle Eastern origin, it is reasonable to conclude that this too was brought from Persia by the Mughal dynasty. The Mughal Empire included the region of Kashmir, which lies immediately adjacent to Afghanistan, and in the mountains of Kashmir, we have the typical roses of Persia (Iran) – the two golden roses species – *R. foetida* and *R. ecae*. And they still grow there today.

The end of the Mughal period.. mid 18th century marks the start of the British rule of India, first as a trading company, the East India Company and late, from 1850s, directly by the British Government.

The British love of roses is well known and regular imports of roses and other plants commenced quite early; mostly from China, particularly from the port town of Canton, now Guangzhou. Even when the roses imported were meant to reach Britain, the ships would stop over in Calcutta, then the capital of India and a big port on the east coast, and the plants would be unloaded to have a rest cure, before continuing their journey. Transporting plants became much easier with the invention of the Wardian case.

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William Roxburgh wrote 'Flora Indica' in which he mentions the roses growing in India and particularly in the botanic garden in Calcutta. Many are clearly of Chinese origin, in fact he gives the name of two roses with their Chinese names. Both in his research station in Samalkot, much to the south of Calcutta, on the east coast, and in the Calcutta Botanic Garden, Roxburgh even had Chinese gardeners to look after his plants.

We now come to two heritage roses, both widely grown in India, particularly for making garlands used in worship. The first is 'Rose Edward', generally held to be the first of the Bourbons, a semi-double, extraordinarily fragrant, continuous flowering rose, which grows from the delta of the River Cauvery in the extreme south up to the foothills of the Himalayas - virtually the entire length of the country. This rose till recently was cultivated in several hundreds of hectares around the temple town of Tanjavur in the Cauvery Delta.

There are various theories about the origin of 'Rose Edward', but the majority of experts believe that this variety arose in the Indian Ocean in the island of Reunion, which was, and continues to be a French territory. It lies between Madagascar and Mauritius. Sometime around 1820, the then Superintendent of the botanic garden in Reunion, M.Perichon, noticed a very fragrant repeat flowering rose. His opinion was that it was a natural cross between the China 'Old Blush' and the Autumn Damask rose, which were planted close together to form hedges for agricultural fields. He sent plants and seeds of this cross to France where it was identified as a new rose and named 'Rose Edouard'.

How did this rose from Reunion reach India, which is quite a distance away, so as to be so widely cultivated in the Cauvery area quite early on and then spreading all over the country? There is, therefore, another school of thought which believes this to be a rose of the Indian region based on the fact that it was cultivated on such a large scale so soon after the hybrid from Reunion was identified. Did it travel from India to Reunion?

Another heritage rose is again widely used for making garlands. We have identified it with the study name 'Kakinada Red', Kakinada being the name of a port town on the eastern coast between Calcutta and Madras (now Chennai). This is again a Bourbon with a very sweet fruity fragrance with hints of apple, quite different from the damask fragrance of 'Rose Edward'. DNA studies done in Canada have shown that this rose is the same as the one called 'Pacific' in Bermuda and 'Maggie' in southern USA, and all of these have close links to a rose called 'Julius Fabianics de Misefa' which was bred by the Hungarian rose breeder, Rudolf Geschwind in late 18 90s . If 'Kakinada Red' is actually a Geschwind rose it is indeed surprising that it seems to have reached India almost immediately after being bred. Its occurrence in Bermuda and the US is equally surprising. Professor

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We now come to an even more mysterious and unidentified rose, our study name for it being 'Telengana Pink' for the place where we first found it in the 1960s. This rose is very much a China with typical habit of growth bearing light pink flowers with beautiful Hybrid Tea form at bud stage. Our travels within India show that it grows over an extraordinary range – the courtyards in the wooden palace of the erstwhile kings of Travancore in the extreme south to many areas in peninsular India, including Telengana, in central India near the Kanha Tiger Sanctuary. We also found it in Thailand in the Petchaboon hills. None of the world's rose experts have been able to identify this rose. Nor does anyone have a convincing explanation for its occurrence in south Asia.

Now to our favourite species rose.. probably the only tropical species in the world – *Rosa clinophylla*, found in the most exotic locations in India and Bangla Desh – in the 'jheels' or lakes of Bengal and Bangla Desh, on the banks of forest streams of central India, and on the isolated mountain top, Mount Abu, in the desert of Rajasthan in western India. It was reported by British botanists to have been seen in the south too.

The discovery of this amazing species was made in the mid 1800s, in British Indian times, by a Mr Rose, Superintendent of Post Offices whose jurisdiction was Bengal and Bangla Desh which was then part of India. His only means of travel during the flood season was by boat, on rivers and lakes, and once while doing so, he found this rose coming out of the water. Specimens sent to M.Crepin the taxonomist in Belgium, were identified as *Rosa involucreata*, later renamed *Rosa clinophylla*.

We must mention that, in the 1980s, when we searched for this rose to begin our hybridisation to create warm climate roses, there was only one plant in cultivation in Bengal, the region where in earlier years it was said to be easily found, growing wild and in plenty.

In conclusion, we would like to emphasize that the near loss of this unique rose species emphasizes the need for urgent conservation steps around the world for the preservation of rose species. Along with other plants, roses are gravely threatened by climate change and many areas of their habitat are being developed. In this situation, ex situ conservation in botanical gardens of different climates becomes vitally important. It is most unfortunate that precisely when such ex situ

conservation is urgently required that export regulations on plants in the world have become even more rigid. Even world famous research institutions are unable to get plant material for research and conservation. This problem needs the serious attention of WFRS and botanical gardens of the world.

Text of talk given at Nanyang China, May 2019 at the Regional World Rose Conference

Copies of the original

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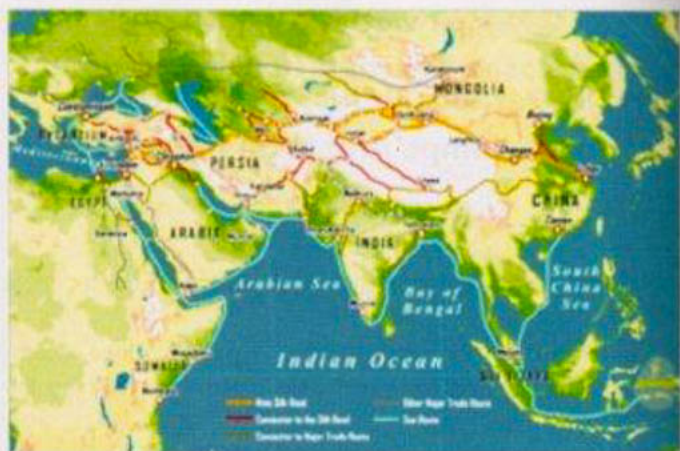
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Silk road

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Domingo Paes and
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Domingo Paes and Fernaz Nuniz, two Portuguese who came to this kingdom around 1537 A.D., mention seeing plantations of roses and bazars where baskets laden with roses were sold, both as loose flowers and made up into garlands. They described the gardens of the nobility as containing rose plants which flowered profusely. In the Vijayanagar Empire, both men and women from all walks of life used roses in great quantities as ornamentation. And it is related that the King, dressed in robes of pure white, embroidered with golden roses, and bejewelled, would daily, following on his morning prayers, shower white roses on his favorite courtiers, his favorite elephants and horses, which were bedecked with chaplets of roses; and that the King's bedchamber "had pillars of carved stone, the walls all of ivory, as also the pillars of the cross-tiers, which at the top had roses carved out of ivory, all beautifully executed and so rich and beautiful that you would hardly find anywhere another such."

Observation on Roses recorded by Domingo Paes and Fernaz Nuniz

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Babur



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Babur inspecting the making of garden

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Kakinada Red

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**Rosa clinophylla Bengal form
sent by Dr.Sen**

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